

REMARKS

Office Action

In the Office Action mailed September 20, 2007, the Examiner rejected claim 7 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Number 5,442,344 to Merkle et al. (hereinafter “Merkle”). The Examiner also rejected claims 1-6 and 8-18 under 35 U.S.C. 103(a) as being unpatentable over Merkle in view of U.S. Patent Number 7,019,492 to Baker et al. (hereinafter “Baker”). For reasons set forth more fully below, Applicant traverses both grounds of rejection and requests that all pending claims be allowed over all references of record.

Section 102 Ground of Rejection

For a reference to anticipate a claim, it must teach each and every limitation of the claim. Claim 7 requires an optical receiver that includes a sensitive phototransistor. Fig. 3 of Merkle shows the housing of what is described in its specification as a probe, however, it does not show the actual optical emitter and optical detector disclosed in the specification (Col. 3, lines 30-32). FIG. 4, however, shows an optical emitter and detector for the appliance optical transceiver (Col. 4, lines 9-16). The schematic diagram of that figure shows the optical detector as a diode and not as a phototransistor. Thus, the Merkle reference does not disclose an optical receiver having a phototransistor, but rather a diode. It certainly does not show a sensitive phototransistor as that term is defined by Applicant in the specification. The Merkle reference also fails

to suggest that a sensitive phototransistor be used for an optical receiver or that a sensitive phototransistor is beneficial for an optical transceiver used in an appliance. For at least these reasons, claim 7 is not anticipated and Applicant submits that claim 7 is not rendered obvious by any of the references of record, either alone or in combination.

The burden of proof that Merkle discloses a sensitive phototransistor is on the Examiner. The Examiner has not indicated what constitutes a sensitive phototransistor. No apparent support exists for the diode of Merkle being equated with a sensitive phototransistor. Therefore, the Examiner has failed to make the case for anticipation and Applicant submits has likewise failed to make a *prima facie* case for obviousness. Thus, the rejection of claim 7 should be withdrawn.

Section 103 Ground of Rejection

Claims 1 and 13

Claim 1 requires that the optical transmitter include high intensity light emitting diode (LED). Claim 13 is similar in that it requires the generation of high intensity light pulses in accordance with a data signal. Acknowledging that Merkle does not show a high intensity LED, the Examiner asserts that one of ordinary skill in the art would have been motivated to replace the LED of the transmitter in Merkle with the high intensity LED of Baker¹ "in order to illuminate

¹ The Office Action actually states the opposite, however, the reverse substitution would result in a circuit not having a high intensity LED. Therefore, Applicant has assumed that the Examiner intended to argue that the LED of Merkle would be replaced with the high intensity LED of Baker.

the supper (*sic*) bright light which is more visible than a normal LED." Applicant respectfully disagrees as visibility is only an issue in the context of the Baker reference and not in the context of the Merkle reference.

The system disclosed in the Baker reference does not use a high intensity LED for data communication between devices. Instead, Baker uses the high intensity LED to indicate to a user of the battery charger disclosed in Baker whether a connection cord has been connected to the battery charger. When the connection cord is not connected, the indicator light is illuminated to let the user know the charger cannot provide a recharging current to a battery. *Baker*, col. 4, lines 1-15. Thus, one of ordinary skill in the art would not combine the teachings of Baker regarding the use of a high intensity LED for the purposes of notifying a human operator of a connection cord condition with an optical data transceiver used for computer communication.

The discontinuity between the two types of uses is especially apparent when the preference for infrared light communication in Merkle is considered. Using a high intensity infrared LED would not result in a more humanly visible light signal as human eyes cannot detect infrared light. Thus, modifying Merkle with the high intensity LED of Baker is not reasonable because making a computer communication light signal more humanly visible is irrelevant to the purpose of the probe in Merkle. For at least these reasons, claims 1 and 13 are patentable over all references of record, either alone or in combination.

Claims 2-4

Claims 2-4 depend from claim 1, directly or indirectly, and, therefore, include the limitations of claim 1. Thus, the unreasonable combination of the Merkle and Baker references is likewise inapplicable to the invention of claims 2-4. For at least these reasons, claims 2-4 are patentable over all references of record, either alone or in combination.

Claims 5, 9, and 17-18

Claim 5 depends from claim 1 and is patentable for reasons similar to those discussed above with respect to claim 1. Additionally, claim 5 requires that the optical receiver include a sensitive phototransistor. As noted above, Merkle does not teach or suggest a sensitive phototransistor. Baker likewise fails to teach or suggest such a device because it has no optical receiver in which to incorporate such a phototransistor. Because none of the references of record, either alone or in combination, teach or suggest the sensitive phototransistor of claim 5, this claim is patentable.

Claim 9 depends from claim 7 and is patentable for reasons similar to those discussed above with reference to claim 7. Additionally, claim 9 requires the optical transmitter to have a high intensity LED. As noted above with reference to claim 5, a device having an optical transmitter with a high intensity LED and an optical receiver with a sensitive phototransistor is neither taught nor suggested by the references of record, either alone or in combination. For at least these reasons, claim 9 is also patentable.

Claims 17 and 18 depend from claim 13 and are patentable for reasons similar to those discussed above with reference to claim 13. Additionally, claims 17 and 18 further specified that the electrical data signal generation occurs in response to particular light intensities. Thus, these claims require the generation of high intensity light pulses and the generation of an electrical data signal in response to low intensity light. Accordingly, for reasons similar to those noted above with reference to claims 5 and 9, these claims are also patentable.

Claim 6

Claim 6 depends from claim 5 and, therefore, includes the limitations of claim 5. Thus, this claim is patentable for reasons similar to those discussed above with reference to claim 5.

Claim 8

Claim 8 depends from claim 7 and, therefore, includes the limitations of claim 7. Thus, this claim requires a sensitive phototransistor that is neither taught nor suggested by Merkle or any other reference of record. For at least these reasons, claim 8 is patentable over all references of record, either alone or in combination.

Claims 10-12

Claims 10-12 depend from claim 9 and, therefore, include the limitations of claim 9. Thus, claims 10-12 are patentable for reasons similar to those discussed above with reference to claim 9.

Claims 14-16

Claims 14-16 depend from claim 13 and, therefore, include the limitations of claim 13. Thus, the unreasonable combination of the Merkle and Baker references is likewise inapplicable to the invention of claims 14-16. For at least the reasons noted with regard to claim 13, claims 14-16 are patentable over all references of record, either alone or in combination.

Amendment
December 20, 2007

Conclusion

For the reasons set forth above, all pending claims are patentable over all references of record. Reexamination and allowance of all pending claims are earnestly solicited.

Respectfully submitted,
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